Lecture 8.3 (11:15-11:30)

Minorization-Maximization for Determinantal Point Processes

Takahiro Kawashima (ISM)

A determinantal point process (DPP) is a powerful probabilistic model that generates diverse random subsets from a ground set. If the ground set is finite-sized, it is parameterized by a kernel matrix. In this study, we propose a simple learning rule for full-rank DPPs based on a minorization-maximization (MM) algorithm, which monotonically increases the likelihood in each iteration. We also provide some theoretical and experimental results and a strategy for the acceleration.